Recurrent Varicose Veins

REX L. ROSS, *M.D.*, Los Angeles

• **Recurrence or persistence of varicose veins after treatment may be charged to incomplete original evaluation of the patients' venous insufficiency and to therapy that was not adequate because not planned on the basis of the particular kind or degree of venous incompetence in each individual case.**

The chief factors in the avoidance of failures of treatment are the eradication of all sites of incompetence and of all secondary incompetent venous communicating pathways; and careful follow-up examination and additional treatment when necessary.

PROCEDURES for the eradication of varicose veins are in bad repute in the minds of many unhappy patients who have had recurrence, and of many physicians who are dissatisfied with the ultimate results.

One should be reluctant to guarantee a complete cure to a patient undergoing any definitive treatment of varicose veins. Rather the patient should be given to understand that an attempt is being made to correct a defective venous circulation, and although the desired result may be achieved without difficulty, further treatment may be necessary to forestall or correct reappearance of varices. It should be pointed out that there is an inherent defect in the structure of the superficial veins in persons with a tendency to varices.

On the other hand, recurrence should rarely be encountered if all the abnormal functional changes which produced the varices are properly evaluated. Oftentimes, however, one may not see the woods for the trees. There may be additional abnormalities which lead to varicosities, other than obvious gross incompetence of the greater saphenous system.

What are some of the factors contributing to recurrence?

Reliance on Sclerosing Therapy Alone

Although it is agreed that sclerosing therapy of small localized varices may be successful where there is no incompetence of the major trunks of the superficial system, it is obvious that the latter defect, aided by a rich venous collateral circulation and abetted by recanalization will inevitably lead to further trouble.

Failure to Ligate All Tributary Branches at the Saphenofemoral Junction

If the saphenous vein is ligated low instead of at the saphenofemoral junction, and, if all the tributary veins are not divided and ligated at this level, retrograde flow will reestablish itself through remaining collaterals.

Sometimes a double saphenous vein exists or there may be a lateral femoral cutaneous branch, which may lead to recurrence if the saphenous proper is ligated below the point of origin of trunks or if the tributaries are left communicating with these secondary trunks.

Attending Surgeon, Vascular Clinic, Los Angeles County Harbor General Hospital and Hollywood Presbyterian Hospital.

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Failure to Ligate Large Labial Branches

Often, during the last trimester of pregnancy, huge, distended, labial varices develop. Ordinarily they diminish to a much less conspicuous size within a month or two postpartum. These labial tributaries may communicate with the greater saphenous trunks and reestablish a backward flow into the saphenous after high ligation.

There is also commonly found a deep pudendal branch which originates from the femoral vein at

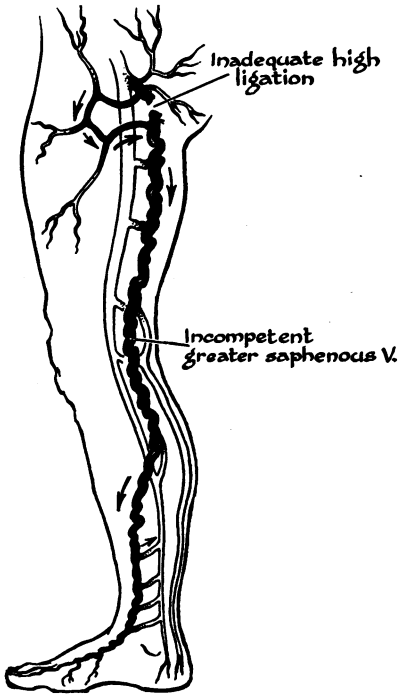

Figure 1.—Type of incompetence: Greater saphenous vein only. Recurrence due to failure to ligate all tributaries at saphenofemoral junction.

the saphenofemoral junction or from the saphenous vein. There is a descending branch from this vein which is often responsible for recurrence.

Failure to Treat Incompetent Short Saphenous Vein

Since it communicates freely with the greater saphenous vein, it is obvious that an incompetent short saphenous vein left untreated can be responsible for recurrent distention and dilatation of long saphenous varices when simple high ligation has been done and especially when the greater saphenous trunk has been left in situ.

Incompetent Perforating Veins

Incompetent perforating veins may exist and communicate either with the main saphenous trunks, or may be independent of these and anastomose with minor superficial varices. These incompetent perforators, if not eradicated, may be a source of recurrence when high ligation has been done and the saphenous trunks have been left in situ, or even when the saphenous trunks have been stripped. Incompetent perforators may communicate with secondary superficial veins which are not a part *per se* of the principal saphenous trunk, but are located in a bizarre distribution throughout the leg. These perforators therefore must be looked for before operation, marked well, and ligated individually below the fascia at the time of operation if recurrence is to be avoided.

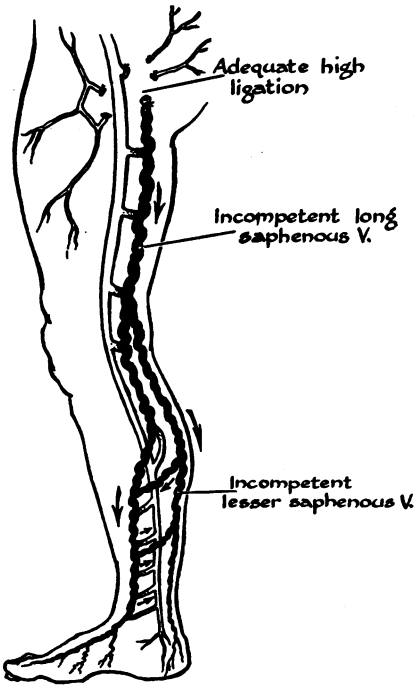

Figure 2.—Type of incompetence: Greater (long) saphenous vein and of lesser saphenous vein. Recurrence due to failure to interrupt incompetent lesser saphenous which communicates with the greater saphenous.

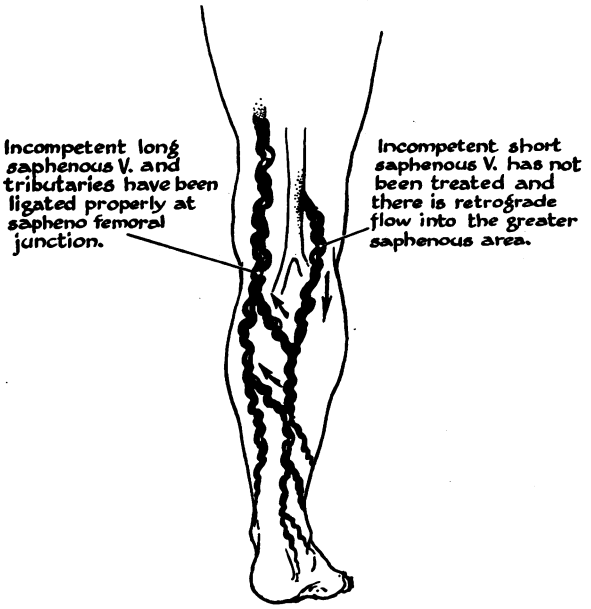

Figure 3.—Type of incompetence: Greater (long) saphenous and of lesser saphenous. Recurrence due to failure to interrupt incompetent lesser (short) saphenous which communicates with the greater saphenous.

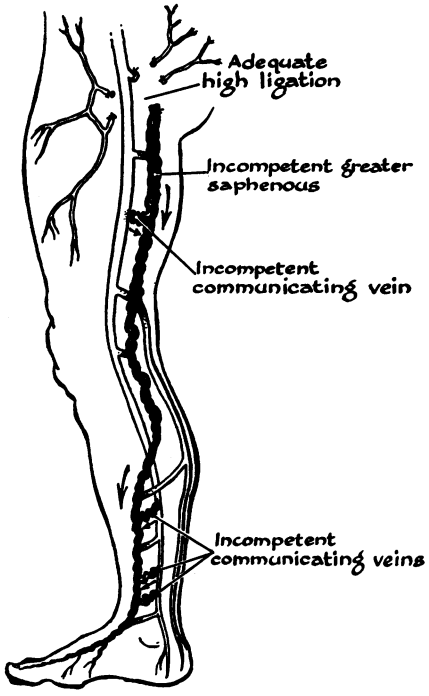

Figure 4.—Type of incompetence: Greater saphenous vein plus incompetent communicating veins. Recurrence due to failure to eradicate incompetent communicating veins although a proper high saphenous ligation has been done.

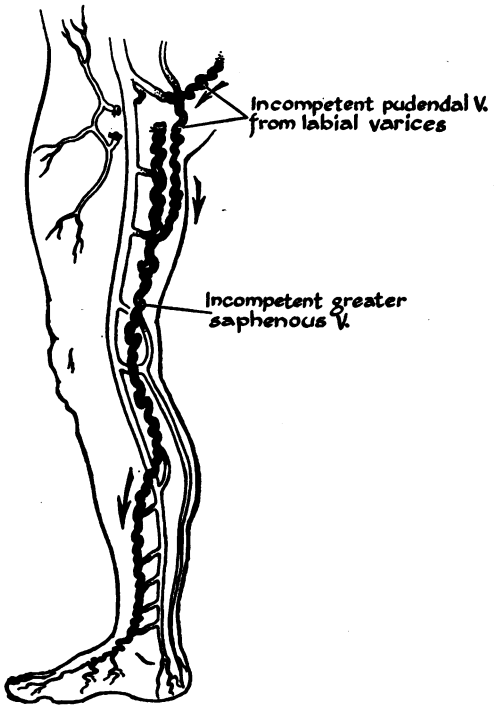

Figure 5.—Type of incompetence: Greater saphenous and pudendal branch from labia with descending branch communicating with greater saphenous. Recurrence due to failure to ligate the incompetent pudendal branch.

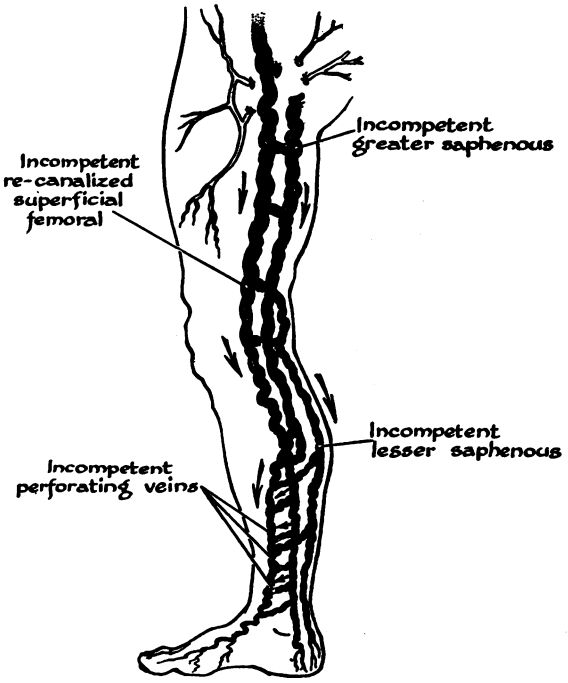

Figure 6.—Type of incompetence (postphlebitic): (1) Incompetence of greater saphenous vein; (2) incompetence of lesser saphenous vein; (3) incompetence of recanalized superficial femoral vein; and (4) incompetent perforating veins. Failure due to not eliminating all four abnormalities.

Postphlebitic Varices

Postphlebitic varices pose a somewhat different problem than simple incompetence of the superficial veins, and all the features involved in this syndrome must be taken into account if the incidence of repeated difficulty is to be kept low. Of course, it is necessary to correct superficial incompetence but it should be remembered that the superficial change stems primarily from the incompetence of the recanalized deep veins, causing distention, backward flow and incompetence of the deep communicating veins and, finally, of the superficial system. It is necessary to ligate the superficial femoral or popliteal vein in conjunction with ligation and stripping of the incompetent greater and lesser saphenous systems to achieve the best results; and a "Linton Flap" type subfascial procedure may be required to further eradicate all perforators communicating with the surface veins.

Dealing with only one of the factors mentioned, and ignoring the others, will obviously lead to discouraging results.

Arteriovenous Fistula

The possibility of an overlooked arteriovenous fistula must be considered as a cause of persistent or recurrent varices. The classic signs of arteriovenous fistula may be absent if the fistula is small or if there are multiple small (congenital) arteriovenous fistulous communications.

Failure to Obliterate Residual Varices

If residual varices persist after ligation, or after ligation and stripping, they should be eradicated with sclerosing injections. Failure to observe patients diligently in this regard postoperatively is one of the commonest oversights in treating varicose veins, and is one of the most frequent causes of persistence of varices. Massive retrograde injections at operation, which have been so extensively used, are not as satisfactory and are potentially dangerous.

The most satisfactory management of varicose veins involves stripping when possible, eradicating all incompetence of both long and short saphenous veins and incompetent perforating or deep communicating veins, and interruption of an incompetent, recanalized superficial femoral vein when present.

Patients who have a tendency to varicose veins should change from sedentary or standing occupations. Elastic supports should be used freely, and careful follow-up examinations, with elimination of residual minor varices by sclerosing injections, is essential to a good end result and a happy and satisfied patient.

1033 Gayley Avenue, Los Angeles 24.